

Management of Common Hand Conditions

I. History

- A. Age
- B. Dominant Hand
- C. Occupation and Hobbies
- D. Duration of Complaint
- E. Mechanism of Injury, if any
- F. Exact Position at Time of Injury
- G. Record Exactly Which Digit and Which Part of Digit, Hand or Wrist is Injured
- H. How is Function Impaired?
- I. History of Similar Previous Injury or Condition
- J. History of Neck Trauma
- K. Concomitant Medical Conditions

II. Anatomy and Terminology

- A. Always Describe as Radial and Ulnar (Not Lateral and Medial!) and use Palmar and Dorsal
- B. Digits are Thumb (T), Index Finger (IF), Middle Finger (MF), Ring Finger (RF) and Small Finger (SF)
- C. Palm is Thenar, Mid-Palm or Hypothenar

III. Physical Examination

- A. Always Examine Entire Upper Extremity
- B. Test and Document Motor, Sensation and DTRs (including Hoffman's) of Entire Bilateral Upper Extremity
- C. Check Range of Motion of Elbow and Shoulder Joints
- D. Check Pulses
- E. Record Grip Strength and Two-Point Discrimination if Dynamometer and Two-Point Discriminator if Available
- F. Flexor Digitorum Profundus: Instruct Pt. to Bend the Tip of Finger
- G. Flexor Digitorum Superficialis: Instruct Pt. To Bend Finger at "Middle Joint"
All the other fingers must be stabilized in extension
- H. Flexor Carpi Radialis, Palmaris Longus and Flexor Carpi Ulnaris: Pt. Flexes Wrist; Palpate Tendons
- I. Dorsal Wrist Compartments
 - 1. Abductor Pollicis Longus and Extensor Pollicis Brevis
 - 2. Extensor Carpi Radialis Longus and Brevis
 - 3. Extensor Pollicis Longus
 - 4. Extensor Digitorum Communis and Extensor Indicis Proprius
 - 5. Extensor Digit Minimi
 - 6. Extensor Carpi Ulnaris
- J. Sensory Branches of Nerves

IV. Carpal Tunnel Syndrome

- A. Most Common Compression Neuropathy of Upper Extremity
- B. History
 - 1. Pain, paresthesias in palmar thumb, index finger, middle finger and radial aspect of ring finger

2. "My whole hand is numb."
 3. Worse with driving, worse at night
 4. Diabetes, Hypothyroidism, Pregnancy
 5. Latter stages dropping items
 6. Pain May Refer to Elbow or Shoulder
 7. Women More Commonly Affected Than Men
- Pyridoxine
100 mg BID
for carpal tunnel*
- 50 mg BID
in elderly.*
- C. Predisposing conditions: Hypothyroidism, Pregnancy, Diabetes, Rheumatoid Arthritis,
 Low B12
 D. Observation for Thenar Atrophy
 E. Complete Exam of Upper Extremity
 F. Check and Document Grip Strength and Two-point Discrimination
 G. Perform Phalen's and Tinnels
 H. Check Labs
 I. Consider EMG
 J. Consider radiographs (to exclude concomitant rheumatoid or osteoarthritis)
 K. Steroid Injection Can Provide Temporary and Occasionally Lasting Relief
 L. Referral for Surgical Release

V. Osteoarthritis

- A. Pain is principle symptom, exacerbated by activity relieved by rest.
 B. First CMC is particularly affected. Metacarpal joints are usually spared
 C. Bouchard's and Heberden's Nodes
 D. First Carpal Metal Carpal (CMC) Frequently Involved
 E. OT
 F. Possible Disease Modifying Agents If Inflammatory Variant
 G. Consider Nocturnal Spinting
 H. Intra-articular Steroids (20 mg Kenalog and 1/2 ml Plain Bupivacaine;
 Must Use >25 G Needle)
 J. Occupational Referral

VI. deQuervain's Tenosynovitis

- A. Tenosynovitis of Abductor Pollicis Longus and Extensor Pollicis Brevis in the First Dorsal Compartment of the Wrist
 B. Finklestein's Test
 C. Tenderness Must Localize Between First Dorsal Compartment and First Carpal Meta-Carpal Joint
 D. Must Exclude DJD of First CMC Joint (Consider Radiographs)
 E. Steroid to the First Dorsal Compartment (20mg Triamcinalone and 1/2 ml Plain Bupivacaine)
 F. Nocturnal Splint
 G. Consider Occupational Therapy

VII. Stenosing Tenosynovitis or Trigger Finger

- A. Occurs in Any Digit Including the Thumb
 B. Most Common Ring or Middle Finger
 C. Inflammation of Tendon at A1 Pulley
 D. Palpable Tender Nodule
 E. Triggering or Locking
 F. Intralesional Steroid Injection (20mg Triamcinalone and 1/2 ml Plain Bupivacaine)
 G. Limit Injections to Two per Digit to Avoid Risk of Flexor Tendon Rupture
 H. Splint for 24 to 48 Hours Post Injection; then Nocturnally
 I. Consider OT

VIII. Dupuytren's Contracture

- A. Basically Superficial Palmar Fasciitis (Aponeurosis Between the Skin and Flexor Tendons in the Distal Palm and Fingers.
- B. Flexor Tendons are Not Involved
- C. Ring and Small Fingers Most Commonly Involved
- D. Begins as Nodule, Progresses to Fibrous Bands With Flexion Contracture of Fingers
- E. Usually Painless
- F. More Common in Men
- G. Some Response to Intralesional Steroid
- H. Prompt Surgical Referral Required for any Fixed Contracture

IX. Lateral Epicondylitis

- A. More Often Due to Repetitive Manual Labor than to Tennis
- B. Involves Detachment of Extensor Carpi Radialis Brevis at Origin of Lateral Epicondyle
- C. Worse With Forearm Pronation and Extension of Wrist
- D. Responds Well to Intralesional Injection
- E. OT

X. Cubital Tunnel

- A. Entrapment Neuropathy of Ulnar Nerve
- B. Check Tinnels and Elbow Flexion
- C. Hypaesthesia Ring and Small Finger (Document 2-Point Discrimination)
- D. Observe for Wasting First Dorsal Interosseous
- E. Froment's Test
- F. Inability to Cross Index and Middle Fingers or Claw Hand (Advanced Findings)
- G. Consider EMG
- H. Refer to OT